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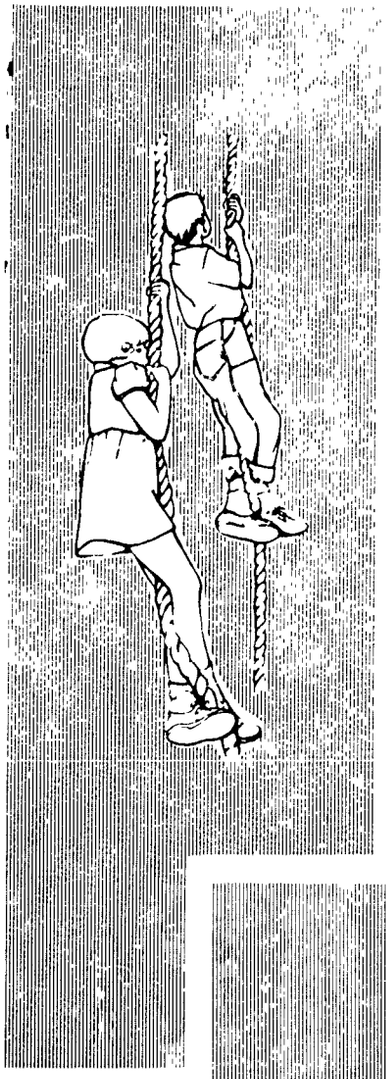
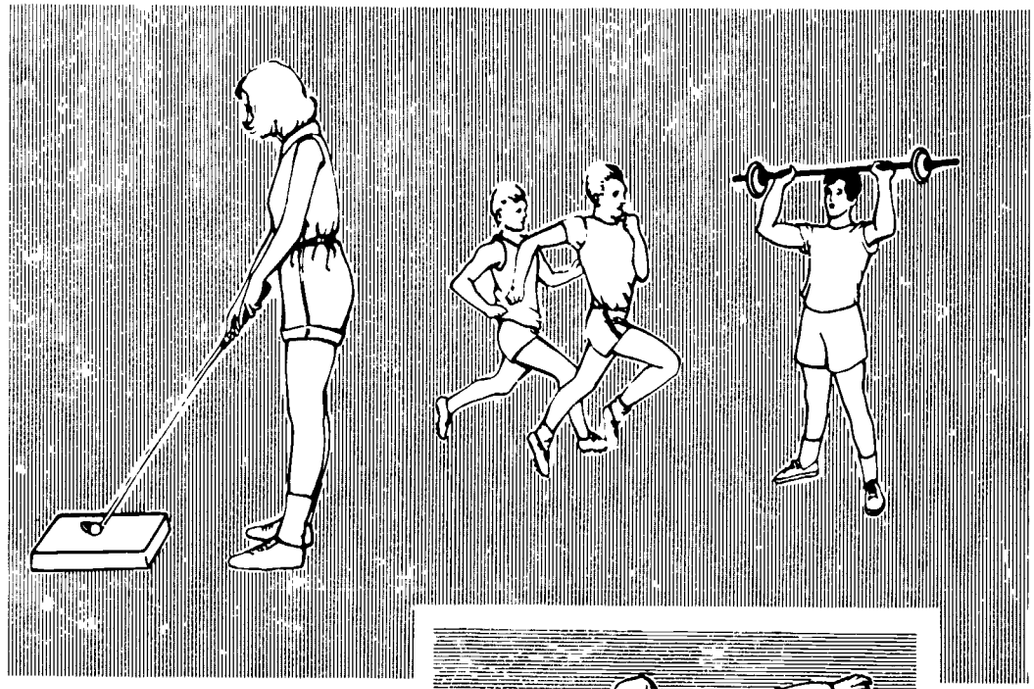
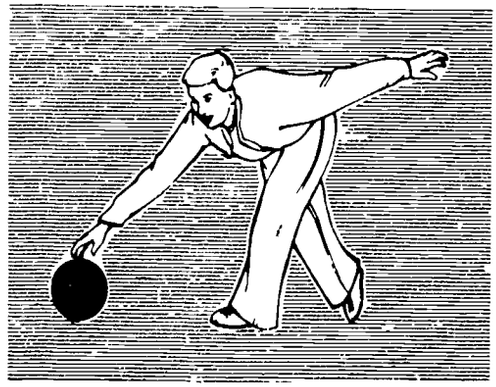
ABSTRACT

The discussion of physical education for both handicapped and gifted children is intended to assist administrators and teachers in planning, presenting, and evaluating well-balanced physical education programs. The need for physical education is discussed in terms of purposes, objectives, and the value of a well-balanced program. Examined briefly are various aspects of an adapted physical education program: recognizing individual differences, health examination and physician's recommendations, resource personnel, parental involvement, public relations, records and forms, facilities and scheduling, and preventive programs. Defined are three activity levels (unrestricted, moderate, and limited activity) at which children may be placed for physical education purposes. Major physical, emotional, and special health problems affecting children are described and specific physical activities are suggested as appropriate for each condition. Finally, purposes of measurement and evaluation are set forth. (KW)



PHYSICAL EDUCATION FOR THE EXCEPTIONAL CHILD





The University of the State of New York
THE STATE EDUCATION DEPARTMENT
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PHYSICAL EDUCATION

for the

EXCEPTIONAL CHILD

The University of the State of New York
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FOREWORD

Educators in the last two decades have been increasingly aware of the need for providing additional activities for the exceptional child. The term "exceptional child" is used in this bulletin to identify that pupil who differs from his peers to such an extent that he cannot profit fully from the regularly prescribed curriculum and for whom special provisions need to be made in order for him to realize his potential.

There are four broad categories into which exceptional children may be divided: the physically handicapped, the mentally retarded, the mentally gifted, and the emotionally disturbed. A child who fits into any one category may very likely also fit into one or more of the others.

Although it is the purpose of special physical education instruction to improve body movement and physical development, these are not the only objectives. There are some deviations which can not be remedied and the child must be taught to live comfortably within but at the same time to the hilt of his capability.

This guide was developed to assist school administrators, directors of health, physical education, and recreation, and teachers in planning, presenting, and evaluating well-balanced programs of physical education.

The original manuscript for this publication was prepared by Dr. George Stafford, Professor Emeritus, University of Illinois, and Michael Flanagan, Supervisor of Physical Education, Pennsylvania State Education Department. Dr. Anthony Pelone, Director of the Division for Handicapped Children and Dr. Leo Feichtner, Chief of the Bureau of Health Service, with their staffs, reviewed the manuscript and made many valuable suggestions which were incorporated in the revision. Richard Lacey, Pelham High School, assisted in the writing of the revised manuscript. Dr. George Grover, Director of the Division of Health, Physical Education and Recreation and members of his staff also reviewed the manuscript and their suggestions were incorporated.

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INTRODUCTION

Programs for the exceptional child are becoming more and more prevalent in today's schools. It is now generally agreed that every "exceptional" student, just like every "normal" one, is entitled to the best possible education adapted to his particular needs and abilities - an education which will enable him to grow up in a world that does not set him apart and in which he, in turn, does not set himself apart.

What is meant by the designation "exceptional child"? In simplest terms, he might best be described as a youngster who differs in some more or less marked degree or manner from the so-called "normal," and for whom it is necessary to make special provisions in the school setting. The exceptional child may be found at both ends of the educational spectrum; may be intellectually gifted or he may be physically, mentally, or emotionally handicapped.

Among the more common deviations are handicapped vision, cardiac disturbance, hearing disability, epilepsy, intellectual brilliance, mental retardation, emotional disturbance, speech handicap, cerebral palsy, and muscular dystrophy. In addition, such deviations as markedly low physical fitness and poor posture may be considered exceptional.

Although children like these are considered exceptional, it should always be remembered that they have the same basic needs and drives as their normal classmates: the need to belong, to find security, to know love, and to experience success and achievement. Like their peers, they too will eventually be required to make a satisfactory adjustment within a predominantly "normal" society.

For these reasons, many educators feel that special classes are not necessarily the school's best answer for the problems of the exceptional child, but rather that he should be selectively placed in an adapted program in the regular classroom. W. M. Cruickshank has stated, "the degree to which the child with a handicap is accepted by his peers, his family, his school, and his community as a child; and the degree to which he can accept himself as a child will help determine the extent to which he becomes an exceptional child. The concept of the handicap and the impact of the handicap per se cannot help being severely implanted in the child when he is segregated into a special class."[1]

The normal curve shows that individual differences are natural. A school population will always include pupils with varying degrees of physical and mental ability. Exceptional children should have the benefit of experiences with their normal peers whenever possible. In like manner

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[1] Cruickshank, W. M. The Exceptional Child in Contemporary Education. Syracuse University. 1952. p. 10.

normal youngsters should be given the opportunity to understand, accept, and adjust to those who are exceptional.

Placement of the exceptional child in regular groups (in physical education as in everything else) is desirable where possible, but it will work as it should only if: (1) the class can provide for the child's intellectual, social, emotional, and physical needs; (2) he can become a contributing member and compete on a fairly equal basis; (3) the school plant provides accessibility to the area of the building to which he must go in the routing of his program; (4) the teacher understands the nature of his deviation and is convinced of the worth of having him in the group.

Educators have the responsibility for assisting in an all-out effort to help the exceptional child live not only within the limits of his abilities but also to the hilt of his capacity. To accomplish this, all available resources of the school, community, and home must contribute and work together. The child will then feel that he is indeed a part of society, and he will have a reasonable chance of achieving security and success.

Does all of this apply to physical education? Physical education is recognized as an integral part of education, and should, therefore, be an important part of the exceptional student's school program. In fact, the needs of the exceptional child in this area may often be greater than those of his normal counterpart.

The apparent physical "unfitness" of modern youth can no longer be ignored and this applies to the exceptional as well as to the normal. The cerebral palsied child, the gifted child, the child with speech or hearing disabilities, and the mentally retarded child should be encouraged to participate in activities which are designed to promote his optimum physical development and fitness and skills in games as part of his social and emotional growth.

Much has been written about the psychological, emotional, and educational difficulties of the exceptional pupil, and a great deal of this literature has focused on his learning problems and their solution. On the other hand, very little writing has dealt with the play, physical education, and recreation of physically handicapped and mentally gifted or retarded children. It is then, the purpose of this publication to try to fill this gap and to offer suggestions to administrators, teachers, and parents which will help them better understand the benefits of and the necessity for a safe program of physical education adapted to the needs, interests, and capacities of their exceptional children.

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THE NEED FOR PHYSICAL EDUCATION

Purposes and Objectives

Does the exceptional child need physical education? Man is made for movement - movement or activity - which leads him into learning situations that promote mental, social, and emotional development as well as organic growth. Movement is an integral part of physical education and is considered one of the basic keys to learning. Under the impetus of psychology, we are now more than ever aware of motor-readiness relationships. Movement indicates that some action is used in seeking a solution to a problem. Each child individually analyzes the problem and tries to find a solution within his physical and mental limitations.

Each child needs many opportunities to explore the many uses of his body. Examples of some problems to be solved are:

1. Can you bounce the ball as high as your head?
2. Can you bounce the ball as high as your head and catch it?
3. Can you hop on one foot?
4. How many ways can you move your body from one boundary to another?
5. Can you hold hands with a partner and run to a boundary?

Many of the exceptional child's handicaps such as poliomyelitis and muscular dystrophy restrict movement. Muscular weakness and poor posture are prominent characteristics. He may also lack other competencies which are necessary for successful participation in physical activities. The mentally retarded child is often slow to "size up" game situations and he may be rejected by the group. The gifted youngster may be so engrossed in his books that he fails to keep pace with his fellow students in other experiences. He perhaps hesitates to engage in physical activities which label him a poor performer. Practically all exceptional children have their physical problems, and a good program of physical education will help them alleviate these problems, if not eliminate them, and will raise their general level of physical well-being.

There is no question of the present need for improved fitness of youth. Without this basic fitness there is little hope for continuous participation in those experiences which are needed to develop the desirable social and emotional competencies essential for present-day living. The exceptional child needs physical vigor as much as or even more than the normal child.

As an integral part of education, physical education can contribute to the exceptional child's acquisition of his optimum fitness, the skills necessary for successful participation in the various activities of his group, and the development of better human relations through these improved social competencies.

Physical education for both the exceptional and the normal pupil is an

essential part of the total school program, and its general aim is the same as that of other disciplines in the curriculum: to develop the child to the full extent of his capacities by presenting many broad, varied, and meaningful experiences.

In accordance with this philosophy, the objectives of a modern physical education program may be stated as follows:

To develop an awareness of self in the physical environment, the body and its capabilities and the components of movement which, in turn, contribute to the understanding, knowledge, and movement responses of each child in every class.

To promote physical growth and organic vigor through the development of strength, power, motor ability, flexibility, endurance, and proficiency in skills necessary for the performance of physical activities.

To develop social competencies and qualities that will contribute to personality capable of displaying leadership, a competitive as well as cooperative spirit, aggressiveness as well as sociability, and other desirable standards of conduct essential to good citizenship.

To instill within each pupil appropriate interpretive development and emotional responses which indicate a knowledge, judgment, and appreciation of physical education activities.

To develop a recreational capacity for a variety of seasonal and lifelong activities and the habit of participating in them, within the limits of his ability.

Specifically, physical education should permit each exceptional child to attain:

An understanding of his physical potentialities as well as his limitations and an acceptance of the need for living within them.

A correction and an improvement of his posture mechanics.

Organic vigor within the scope of his handicaps or limitations.

A competency in a variety of skills and safety habits necessary for him to participate in recreational sports and games.

Social adjustment as a result of participating in both membership and leadership positions in group physical activities.

Physical Activities as Educative Agents

The physical activity of the child is one means by which he acquires acceptance by other children. Being purposeful, it often gives satisfactions

which are not always present in the everyday world. The early elementary and preschool years should be rich in physical education experiences which will satisfy the child's organic, social, and emotional needs.

Through purposeful activities in physical education the child learns that he must respect the wishes of the group, wait his turn, and share with others. He also learns that he must make decisions and take the consequences of those decisions. Games often call for "staying with it," sustained effort and endurance. Good work habits are established as the child learns to finish the job.

A Well-Balanced Program

In the minds of many people, physical education is concerned largely with activities which occupy TV screens and sports pages. Deeds of professional performers in baseball, football, basketball, and golf rate the headlines. Rarely is space given to such items as Tom's improvement in chinning himself or his progress in learning to swim or to Mary's enthusiasm about her success in doing a cartwheel. The scope of physical education extends, of course, far beyond the athletic performances which are reported in the daily paper.

An adequate program of physical education starts in the kindergarten where informal activities meet the child's basic needs. Singing games such as Looby Loo and Farmer in the Dell are important. Creative exercise which permits the young child's imagination to be expressed in his imitation of the hopping bunny or the galloping horse, and games of hunting such as Run, Rabbit, Run, which include fleeing and chasing give him experience in fundamentals of running, jumping, climbing, throwing, and catching. In the course of such activities the child learns to perform these movements with safety, skill, and competence. Skills must be developed through repetitive practice until a degree of mastery has been attained.

The young child moves largely in his own shadow. He must learn to play with another child in simple activities. Gradually he learns to play with more children and the activities become more complicated. Mild pressure situations are encountered. He learns to tolerate some frustration but mastery of the necessary skills prepares him to solve increasingly complex problems.

Furthermore, the child learns that, with the aid of others he can often accomplish more than he can by his own efforts alone. As he matures, he will gradually grow out of the self-centeredness of early childhood into a cooperativeness with and a concern for others.

Emphasis on good body mechanics should be started as soon as the child enters kindergarten and should be continued throughout the school years in the form of fundamental activities. The correct and effective use of the body is one means of developing and maintaining good posture.

Early attention should also be given to relaxation as one means of preventing the stress and tension common in present-day living. Big muscle

activities should result in release of tension not in producing it. While some competition is desirable, children should learn to play with others for sheer fun and good sportsmanship.

Games such as Hound and Rabbit, Brownies and Fairies, Midnight, Kickball, and Dodgeball introduce the child to individual and group competition and help him to understand the need for cooperating with other children. Team activities are started about the third grade with games such as Spud, where the child hits a standing object, and then Dodgeball, when he hits a moving one. Other games such as Newcomb, Softball, and Soccer all appeal to older elementary school children. Interest in team games should continue throughout the secondary school years.

Individual and dual activities which help the child develop skills in various body movements are gradually and progressively followed, in the later elementary years, by more highly organized games and other activities common to the group.

Games such as Tetherball, Horseshoes, Shuffleboard, Paddle Tennis, and Badminton help the youngster to develop these much needed skills. In the intermediate grades and junior and senior high school such sports as Tennis, Golf, and Archery become a part of the physical education program.

Relays are a means of motivating interest in performing basic skills correctly and speedily. They are usually started in the early grades and progression is made from Circle Ball Pass, which involves no running, to relays involving running to a specified point and returning, running with a ball, running and bounding a ball, and finally to running, bouncing a ball, and shooting a basket.

Self-testing activities such as forward roll, backward roll, and head stand teach body coordination. Rooster Fighting, Bat Tussle, and Indian Leg Wrestle interest the intermediate age group. Work on the apparatus such as climbing a rope, performing on rings, skinning the cat, and the hand walk from a hanging position on the horizontal ladder satsify the child's desire for adventure, and also aid in development of the arm and shoulder muscles and correct body mechanics.

Rhythmic activities appeal to the kindergarten and primary grade child and this interest is continued through the upper elementary and secondary level. By the use of rhythmic movement the child's imagination can be stimulated, and satisfying creative expression will result. Interest in square and folk dancing begins in the upper elementary grades and continues throughout high school. Ballroom and modern dancing become important parts of the rhythm and dance program for boys and girls in junior and senior high school.

Aquatics and water safety can well be started with the primary group, with emphasis on swimming skills which will enable the individual to participate successfully in a variety of water activities. This phase of the physical education program should continue to hold an important place throughout the elementary and secondary grades.

Keeping in mind what is included in an adequate program of physical

education, the teacher can be guided in his selection of activities for the exceptional child by the following criteria:

The activity should not endanger or aggravate the child's condition.

The activity should have some therapeutic value.

The activity should have some recreative value.

The activity should contribute to a well-balanced physical education program.

The teacher's knowledge of an individual's deviation may have a potent influence on the social and emotional adjustment of that individual as well as on his academic progress. What is his deviation? Does it impose limitations or call for enrichment? What real or imaginary problems and frustrations are actually growing out of his deviation? What does he do as a result of people's real or imagined reactions to him? A clear understanding of a child's deviation and the way it affects him should help the teacher in the selection of those physical education activities best suited for him.

ORGANIZATION and ADMINISTRATION of an ADAPTED PHYSICAL EDUCATION PROGRAM

Recognition of Individual Differences

The Regulations of the Commissioner of Education governing Health and Physical Education for the public schools in New York State, in the 1964 revision state, "The physical education or training program as required by law shall include instruction in the following types of activities in sufficient variety to meet individual pupil capacities, interests,and needs: (a) body mechanics; (b) rhythms and dances; (c) games; (d) conditioning activities; (e) athletics; (f) self-testing activities; (g) remedial or corrective activities; (h) individual and dual activities, (i) gymnastics· (j) swimming and water safety where facilities are available; (k) recreation activities; (l) outdoor winter sports...All pupils shall be required to attend courses of instruction in physical education activities adapted to individual pupil needs as indicated by physician's examinations and other tests approved by the State Education Department."

Considerable emphasis has always been given by educators to the concept of individual differences and in many instances public schools have structured their curricula to meet this need. This has not been the trend in

[2]The Regulations of the Commissioner of Education Governing Health, Physical Education and Recreation. New York State Education Department. Albany, New York. 1966.

physical education, however, for often it is assumed that all students enrolled in physical education classes are normal, and the program is conducted on this basis. It is of extreme importance that teachers of physical education become aware of the fact that their discipline has values for everyone, not just for the skilled or so-called normal child.

Individual differences exist in all students and are particularly apparent in physical education. It is vitally important that physical education recognizes the fact that these differences do exist in terms of interest, capacity, fitness, body types, and health.

Recognition of individual differences is evident in that, even in a normal group, not all are expected to reach a uniformly high peak of performance. Rather than attempt to fit the exceptional child into the regular physical education program the trend is to adapt the program to the individual's specific needs, interests, and capacity. The physician's recommendation gives the teacher the clue as to the child's needs and the way physical education can best meet them. In some instances this will be a matter of emphasis. If the pupil is lacking in certain skills, he should be given more time for learning and practicing these skills. If, for example, Basketball is being taught and the child's disability prevents him from actually playing the game, he can be given a modification of basketball skills that will be of some benefit to him.

The child whose abdominal and back muscles are weak may be given extra work to develop these muscles. This can be done as part of the physical fitness or conditioning unit. Many defects, of course, cannot be corrected. For individuals with such deviations the problem is to decide which physical education activities will not aggravate the condition, and at the same time will have some physical, social, or emotional values. Activities should be within the child's ability to perform with a reasonable degree of success. In the final analysis an adapted program of physical education is an educationally sound program.

Adapted physical education has much to offer children who face the problem of securing an education while living effectively with a handicap or deviation. Teachers have the responsibility for designing programs that will give each child an opportunity to achieve the maximum degree of physical fitness, skill, and satisfaction possible for his particular condition.

The National Committee on School Health Policies recommends that:

> "...All pupils be enrolled in physical education classes; those who by reason of illness or disability are unable to participate in the more vigorous forms of activities should be assigned to modified activities."[3]

Physical educators believe that if a child is well enough to be in

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[3] *Suggested School Health Policies.* National Conference for Cooperation in Health, Education. Washington, D.C. National Education Association. 1962. p. 26.

school, except in unusual circumstances, he should be required to participate in physical education activities. If this belief is justified, then it is important that the physical education program be adapted to individual needs.

The adaptation of a physical education program to the needs of the exceptional child does not need to be a complicated task. It is simply a matter for the resourceful and imaginative teacher to make a variety of modifications based on a thorough understanding of the condition of the child. When this is done, the child will no longer be eliminated from worthwhile activities and sent to a study hall or relegated to the sidelines.

It is important to realize that most modifications of activities can be accomplished within regularly scheduled physical education classes. Proper screening of the child and a classification of activities according to a degree of difficulty or stress will enable a teacher successfully to incorporate into the program those students in need of modified activities. A child should be scheduled for a special class only when the regular class cannot meet his needs.

Every pupil should receive instruction that will lead to development of recreational skills, understanding of sports and games, knowledge of how to improve his personal fitness and health, and an appreciation of how to live within the limitations imposed upon him by his handicap or particular condition. In an adapted physical education program there should be no need for blanket excuses for an individual to miss class participation. Rather, recommendation from the physician should result in modifications of the program to meet the child's specific needs.

Health Examinations and Physicians' Recommendations

For many years a regular health examination has been required for all children. A complete checkup, including sufficient psychological data and specific recommendation for correction of remediable defects, is necessary before the exceptional child can gain the maximum benefits from education--including physical education. An examination by a physician is an absolute necessity before any adapted physical educational education program can be instituted. This examination will identify defects which might be aggravated by vigorous physical activity and will serve to establish the tolerance level and the types of physical activities from which the child can benefit.

One of the purposes of the medical examination and other screening procedures is to assist in selecting children for special programing. Many people may be involved in this process. The physician may recommend a child for such a program. The teacher will use the results of physical fitness tests. The nurse teacher will use the health record as well as her personal knowledge of the child. The parent, because of personal knowledge, may recommend that the child be given special consideration, even though no obvious medical problem exists.

The physical education teacher should be concerned with identifying all children who do not fit into the pattern of a regular program of physical education. If identification is provided by the physician, nurse teacher, or

parent, the teacher should follow through by adapting a program to meet the child's needs. Since some children who need special programing may not be identified by the first source mentioned, it becomes the physical educator's responsibility to screen out all children not otherwise identified. Excuses indicating complete exemption or limited activity should be reviewed by the school medical personnel and should serve as a basis for setting up special programs. If the physical educator believes that it is possible to provide a worthwhile program for a child with a blanket excuse, such a program should be presented to the school physician who will then make the decision as to whether the child shall participate. When a restricted program is recommended, the teacher should design such a program and request medical approval.

It is the responsibility of the physical educator to apprise school and family physicians of the modern concepts of physical education in order that they may understand the complete philosophy not only of adapted physical education but of the regular program as well. When this procedure is followed, support for the program is much more likely to be elicited from the medical profession.

Resource Personnel

Although an effective adapted physical education program for the exceptional child is primarily the responsibility of the physical educator, its proper implementation will be the result of the cooperation of many resource persons bringing to the program a unique set of special skills and capabilities prepared to function in terms of the diverse needs presented by the many children active in the program.

In addition to the medical personnel previously mentioned, there are other resource persons who can contribute much. The school administrator will provide adequate space, equipment, supplies, and personnel, and will schedule classes for this program. He can also see that all necessary information about the program is disseminated to those concerned with it. The guidance counselor and/or the school psychologist can contribute to the success of the program by identifying the behavioral problems in certain exceptional children, by evaluating the effects of participation upon the emotionally disturbed, and serving as consultant in matters regarding the mental health of children assigned to special programs.

Although not a member of the professional team which will work with the exceptional child, parents play a vital role. They can help the child to develop and maintain a healthy attitude about the program and can provide encouragement for him to do home exercises designed to reinforce the work assigned in school.

Local conditions will determine the advisability of the addition of other personnel who might assist with the program. These resources may be drawn from service clubs, volunteer health agencies, hospital staffs, newspapers, and parent-teacher organizations.

Parental Involvement

The parents of the exceptional child need help in understanding his condition, and guidance in their efforts to aid his growth and development. They should first understand what general education is attempting to do for their youngster, and they should be made to realize that they must assist the school in its efforts to help him attain optimum efficiency for his capabilities.

Many parents are fearful of physical education for their handicapped children. This fear is often projected to the child in terms of restrictions, and he may thus be denied the experiences that his companions enjoy. The physician can be helpful by explaining to the parent the need for safe physical activity and its beneficial effect on the child's disability. Parents should take a positive attitude and center attention more on what the child can do rather than on what he cannot. The parent may also need guidance in understanding the child's need for activity, not only for improved physical fitness but for wholesome use of his leisure time.

Study groups organized by the school should become routine practice. Parents can serve as an effective means for helping other parents understand the capabilities and the limitations of their exceptional children. Such parents will discover that their child is not the only exceptional one in the community.

Public Relations

An important element in the success of a program of adapted physical education for the exceptional child is coordination and communication among the school personnel of related services, and parents. Good public relations are necessary in most school systems. This is a new program and careful groundwork, through the various public relations media, is of vital importance in acquainting the community, the school, the child, the parent, and medical personnel with its scope. Communication should be a vigorous and continuing process and not a sporadically conducted campaign. All available means should be employed to explain the purpose and nature of the program. This would include conferences, demonstrations, written and oral orientation for students, use of films, filmstrips, leaflets, radio, television, newspapers, and appearance at public meetings. Public relations are as much a part of the job as the actual teaching.

Records and Medical Forms

The preparation of proper records and medical forms for adapted physical education is of vital importance in the program. There is no one best form to use; the objectives and scope of the local program will be the deciding factor. However, certain common points of information should be included in all.

Fred V. Heim, Director of the Department of Community Health and Health Education of the American Medical Association stresses cooperative activity

in the preparation of medical forms for use in physical education programs by stating:[4]

> THE IDEA THAT A FORM PREPARED BY THE SCHOOL PERSONNEL ALONE WILL SOLVE THE EXCUSE PROBLEM IS THE RESULT OF FALLACIOUS THINKING. THE PHYSICIANS WHO ARE EXPECTED TO FILL OUT THE FORM WILL BE UNORIENTED TO ITS USE AND UNFAMILIAR WITH ITS PURPOSES. THEY HAVE THE RIGHT AND THE RESPONSIBILITY TO SHARE IN THE DEVELOPMENT OF THF FORM (TOOL FOR CLASSIFICATION) THAT THEY WILL BE ASKED TO USE.
>
> WHEN REPRESENTATIVES OF THE LOCAL PHYSICIANS PARTICIPATE IN FORMULATION OF THE FORM IT WILL BELONG TO THEM AS MUCH AS TO THE SCHOOL. THEY WILL FEEL RESPONSIBLE FOR INTERPRETING ITS PURPOSES AND PROVISIONS TO THEIR FELLOW PHYSICIANS AND WILL SHARE IN THE OBLIGATION TO MAKE THE FORM WORK AND TO BRING ABOUT NEEDED REVISIONS.
>
> THE SCHOOL SHOULD BE CAREFUL TO OBTAIN REPRESENTATIVES APPOINTED BY THE LOCAL MEDICAL SOCIETY OR AGREED UPON BY THE PHYSICIANS OF THE COMMUNITY. WHEN THIS IS DONE THE APPOINTED DOCTORS WILL BE ABLE TO SPEAK FOR THE LOCAL PROFESSION AND NOT FOR THEMSELVES AS INDIVIDUALS. IN MANY PLACES THERE IS A SCHOOL HEALTH COMMITTEE OF THE MEDICAL SOCIETY ALREADY AVAILABLE FOR LIAISON ACTIVITIES OF THIS KIND.
>
> SUCH COOPERATIVE DEVELOPMENT OF A FORM AND PROCEDURES FOR CLASSIFICATION HAS GONE ON SUCCESSFULLY IN MANY PLACES. IT HAS BEEN FOUND, HOWEVER, THAT CONTINUING INTERPRETATION OF GOALS AND PERIODIC REVISION OF TOOLS AND PROCEDURES ARE NECESSARY. OTHERWISE THE GOOD COOPERATION ACHIEVED EARLIER MAY DIE ON THE VINE.

Facilities, Equipment, Scheduling

A sanitary and safe school environment has a marked influence on a child's attitude and feelings about health, safety, and physical education. Pure water and sanitary drinking facilities, safe play areas, smooth and dust-free play surfaces, clean locker rooms and gymnasiums provide an emotional climate conducive to ready participation in healthful physical activities.

Provisions should be made for change of clothing and a shower for all

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[4]Fred V. Heim. "Health Classification vs. Medical Excuses from Physical Education," reprint from *The Journal of School Health*. Vol. 32. No. 1. January, 1962. pp. 16, 17.

grades starting at least with the intermediate group so that all children can return to their classrooms refreshed and clean. Proper care of injuries, safe practices on playground and play apparatus are also important.

All too often, elaborate and expensive, but unnecessary, equipment and supplies are requested. Basically the same equipment may be employed as is used in regular physical education classes. As the program progresses, supplementary materials for some severely handicapped children may be included in the budget. It should be said at this point that it is quite possible for teacher and pupil to become so dependent on elaborate equipment that home exercise routines fade into nonexistence and any type of carry-over program for the student is diminished or lost forever.

Whenever possible, the exceptional child should be scheduled in the regular program of physical education. If he cannot be served adequately in a normal group, then provisions should be made for special classes that will enable him to secure the full benefits of a program suited to his capabilities.

While waiting for information from the physician concerning the child's condition, the teacher should take the safe course by removing the child from participation in any physical activity. During this period of inactivity, the instructor should assign to the child interim duties that will relate to the physical education program: reading assignments covering techniques and rules of various games, serving as an official, scorekeeper, or recorder, and assisting with equipment and clerical details.

Preventive Programs

A major function of physical education is to help boys and girls keep physically fit and grow strong through participation in physical activities which are adapted to their needs, interests, and emotional development. Such a program can also prevent disabilities like low physical fitness and poor posture, which may cause the child to be classed as exceptional. In other words, a sound progressive physical education program started in the nursery or kindergarten could be termed preventive.

Such a program would call for: large muscle activities to develop a high degree of physical fitness; learning of skills in fundamental movements in running, swimming, climbing, jumping, dodging, kicking, throwing, batting, and catching; sufficient practice in activities which promote greater social competencies and emotional maturity. Such activities should, of course, be available to *all* children.

This program should also extend beyond the schools. Schools and communities should plan out-of-school activities for both boys and girls. Competition should be encouraged but should not be focused entirely on highly organized and competitive sports for a few physically talented athletes. Carry-over activities such as Badminton, Tennis, Swimming, and Horseshoes should be encouraged. Communities should also see the need for and provide community recreational facilities for all. Coeducational activities are also important for they help boys and girls get along with each other in a

conventionally acceptable manner.

When a preventive program is functioning properly, there should be less incidence of poor posture and low physical fitness, and the general objectives of the whole physical education program should be attained.

PHYSICAL EDUCATION FOR CHILDREN REQUIRING SPECIAL INSTRUCTION

Basic Considerations

So that appropriate provision can be made to meet a child's special needs, his abilities should be determined, causes of his special problems studied, and the program planned on the basis of this information. Each child then will have the opportunity to participate in the activities most beneficial to him. Through these activities the motor skills that are necessary for successful participation will be acquired.

In adapted physical education, each child must have his own individual program. Just what activities are included will depend upon his specific deviation or growth and development pattern and should be planned by the physician and teacher together. The physician will make the diagnosis, will determine the capacities and limitations of each child, and will interpret his findings to the teacher, who can then plan an appropriate program of physical education predicated upon the medical findings. The result should be finally checked by the physician before it is put into effect.

Any one of several physical conditions may cause a special need, but the condition would seldom be of such magnitude that the individual would be unable to participate successfully in worthwhile physical activities. The child whose locomotion is impaired by an orthopedic difficulty should have opportunity to improve his locomotion as much as possible and at the same time acquire the skills that will help him participate successfully in certain physical activities. The individual with postural defects that may be causing this poor coordination should be helped to correct the postural defects or to compensate for them by acquiring skills essential to coordinated movement.

A child with a cardiac disability should be encouraged to live fully within the limit of his particular condition. A youngster who is malnourished or is recovering from an operation, illness, or accident usually requires a program of limited activity. The teacher should seek the physician's advice and follow his instructions in working out with each individual a program that meets his specific needs and that will provide opportunity for resting or engaging in semi-active games and dances. All individuals should have opportunities for adequate and suitable release from tension. In addition to teaching the child how to relax, the teacher must identify the causes of tension and if possible, have them removed. He may find that, for some children vigorous activity is more satisfying than rest and quiet activity.

Girls must be taught at home and at school to regard menstruation as a

normal physiological function. Pain, if it occurs, is often evidence of an emotional conflict. It should be emphasized that good health, built upon a program of adquate sleep, exercise, work, cleanliness, and relaxation, contributes to a normal menstrual cycle.

Certain physical conditions may cause a child to be disturbed emotionally; conversely, an emotional disturbance may be the cause of the physical deviation. The child who is affected in either of these ways should be given the special consideration and guidance he needs. Being overweight or underweight may aggravate a feeling of inferiority; a deformity, birthmark or other skin condition, or poor muscular coordination may cause a child to fear ridicule; retarded or accelerated development of secondary sex characteristics may cause him to be self-conscious. Children thus affected should be guided into activities which will help him overcome his emotional difficulty.

In planning a program adapted to meet the needs of a child, the teacher should explain the results of the child's medical examination to help him understand his abilities, limitations, and potentialities for physical education. School personnel concerned with the program of adapted physical education should keep parents informed of their children's progress by means of letters and personal conferences, and if feasible parents should have the opportunity to visit the classroom when the pupil can be seen in activity.

Each teacher concerned with physical education for the handicapped child should be cognizant of certain important considerations:

A physician's recommendation is required before a child is assigned to adapted physical education.

Each child should have his own program, designed cooperatively by the physician and physical education teacher, respectively.

All health data and other pertinent records of the child should be available to the teacher.

Physical education activities should be interpreted to the physician by the teacher so that a better understanding and suitable recommendations for programing may be accomplished.

Evaluation of the child's progress should be made at frequent intervals by the teacher and the child.

Along with an understanding of the pathology involved, the teacher must know something of the child's background, his scholastic standing, and his social competencies.

The child must understand his own condition and the limitations which his handicap impose upon him. He must be willing to adapt his activities in order to

live within these limitations, and he needs to know why these limitations must be observed. His many possibilities should be made clear to him.

There must be rapport between the child and teacher. The pupil must be made to realize that his own individual efforts are of paramount importance. The teacher's job is largely one of guidance. The child should be urged to suggest activities which he feels will be helpful to him. Good health habits should be encouraged to develop social competencies. The teacher of the exceptional child may well be the one person whom the child considers his confidant--the person with whom he can discuss his most intimate problems.

Initial success is important. While the pupil must eventually learn to face frustrations, he needs the stimulus of early achievement to overcome any negative or inferior feelings.

Activities should be within the bounds of accomplishment. The child's progress should be noted so that he can build up much needed self-confidence, security, and status.

Programing for Specific Disabilities and Developmental Problems

Practically all exceptional children can be successfully programed for physical education activities by placing them in areas that will have varying degrees of activity ranging from an unrestricted or vigorous program to a restricted or mild program with only those particular exceptions specified and approved by a physician.

Where the restriction of activity is slight or where the total number of exceptional cases in a school is small, the pupils should be scheduled within regular groups. This may be done by placing these children so that they are spread thinly over many classes or by scheduling them in as few classes as possible so that they may be kept in one or more separate squads.

Whenever there are more than a small number of exceptional children in a school, it is highly desirable that special classes be organized in which those with comparable needs may be placed.

The three classifications listed below are suggestions for modifying the physical education program and should not be considered as arbitrary arrangements.

It should be noted that these classifications can be made applicable to all grade levels. It is also important to remember that activity modifications for the exceptional child should be planned so as not to place undesirable restrictions on the other children in the class.

1. Classification A (Unrestricted or Vigorous Activity)

Children placed in this classification should participate in the regular program of physical education with certain exceptions or modifications which have been designated by a physician.

Where approval has been given for the child to be excused from prolonged or sustained running or vigorous dancing, it does not necessarily mean that he is to be eliminated entirely from games and dancing. Such a pupil may, for example, play the role of goalie in soccer and hockey where not much running is required. In any event the placing of the child within the regular class and his continuance within that class will depend on his adjustment to his handicaps, the modifications necessary because of the handicaps, and the degree with which he can participate safely in the program.

2. Classification B (Moderate Activity)

This classification should include only those children for whom the entire program is to be moderate. However, the children in this category should participate in a wide variety of activities. Modifications of this program should be in terms of duration, total amount, and intensity of the activity, with occasional elimination of a particular activity or substitution of another in its place. Examples of Activity Modification:

Games

In those with low organization (running and tag games, relays, circle games, line games) activity can be modified by:

Limiting the number of times a child may run during the game or physical education period
Keeping exertion to a minimum
Avoiding activities that are too vigorous or sustained
Restricting the number of times a child may be "it"
Interspersing frequent rest periods
Refraining from participation in an area that has excessive dust
Avoiding extreme weather conditions
Bouncing balls instead of throwing
Rolling balls instead of bouncing
Having a ball bounce before catching it
Permitting another to run in place of the batter
Substituting lighter equipment
Permitting a child to hold a ball for a longer period of time, as in basketball, or to hit a ball more than a restricted number of times, as in volleyball
Decreasing the size of the playing area
Substituting walking for running
Avoid overstimulation
Making other adaptations on an individual basis

In individual, dual, and team activities (sports, skills, lead-up games, team contests) activity can be modified by:

Decreasing the duration of the game
Slowing the tempo of the activity
Barring sudden spurts of energy
Avoiding overstimulation and fatigue
Omitting certain body movements in activities
Substituting walking for running
Avoiding rough body contact
Using lighter and more manageable equipment
Placing the child in a smaller area to cut down movement
Instituting practice for the child on individual sports skills
Prohibiting certain types of activity, but substituting a related one of a physical or recreational nature
Checking the playing area and the contest rules for any hazards to the child
Avoiding highly competitive athletics
Changing the rules of the contest as needed
Assigning another child to help the exceptional child whenever necessary
Constantly observing the child for any signs of distress
Making other adaptations on an individual basis.

Rhythmic Activities (fundamental movements, creative and interpretive dances, singing games and folk dances, modern dance) can be limited by:

Decreasing the number of repetitions
Doing movements in a slow tempo
Progressing from mild to moderately vigorous movements
Providing frequent rest periods
Limiting participating time
Omitting certain body movements
Substituting walking and gliding for skipping and running
Providing rhythms within the child's capacities and limitations
Using rhythmical patterns in a sitting or lying position
Substituting rhythmical patterns that a child can follow
Making other adaptations on an individual basis.

Self Testing Activities (stunts, tumbling, gymnastics, track and field) can be modified by:

Practicing for form instead of distance and height
Jogging instead of running for time
Substituting accuracy for distance in throwing
Avoiding the throwing of heavy objects
Avoiding apparatus stunts of a support nature
Limiting participation on high apparatus (grips, position, hangs, supports)
Modifying elementary stunts (individual, dual, group)

Many of these activities are actually self limiting because of the strength of the individual and the nature of his disability. In many cases certain activities should be eliminated entirely and substitute activities planned.

Posture and Body Mechanics (movement exploration, developmental exercises) activities may be modified by:

- Using simple exercise movements
- Decreasing the number of repetitions
- Doing repetitions in slow rhythm
- Omitting certain body movements
- Avoiding overexertion
- Using nonweight bearing exercises
- Using a natural or normal rhythm
- Increasing the range of body movement gradually
- Doing exercises in a sitting or lying position
- Directing exercises to a specific part of the body
- Emphasizing gait training
- Doing exercises to improve posture and circulation, and to stretch tight fascia and ligaments
- Teaching relaxation techniques, balance and coordination
- Teaching the principles of lifting, carrying, pushing pulling, stooping, reaching, and standing
- Developing competencies in stopping, starting, twisting, turning, and changing directions.

Aquatics

Modify all activities according to needs of pupils.

3. Classification C (Restricted or Limited Activity)

It should be necessary to place very few children in this type of program. Frequent rest periods may be indicated for them, and they can be expected to carry out reading assignments and to present satisfactory evidence of meeting such assignments. This does not mean that their complete program should be structured in this fashion, for this would defeat the whole purpose of physical education for them. It should, therefore, be used sparingly. Activities for these children may be developed by further modification of Classification B, and since they are restricted or limited, certain considerations should be given to:

- Doing all exercises or activities at a slow tempo
- Substituting rhythmic walking for skipping and other movements in dance
- Having a child participate in games only as long as he remains a part of the circle or formation and does not participate by running or skipping
- Permitting ball handling games provided the child is barred from running or dodging or any other effort that is not mild
- Offering opportunities for instruction in quiet games of a recreational nature,

Planning table games or complete rest when indicated

Local conditions and teacher competency and interest will dictate the extent to which these areas and activities are introduced and modified for the exceptional child. The teacher working cooperatively with the physician can carry out a program successfully, and will contribute greatly to the development of the child. This may be attained three ways: First, physically, through the promotion of better conditioning; second, mentally, through helping each child adapt to his environment by recognizing his assets and limitations; third, socially, through the development of such qualities as teamwork, sportsmanship, leadership, and followership.

TYPICAL CONDITIONS AFFECTING EXCEPTIONAL CHILDREN

The decision as to just what activities should be included in the individual program for each exceptional child will depend upon the specific disability, the areas of the body involved, and the degree of the disability. The important consideration is, to provide activities which are within the child's tolerance. The offerings should make it possible for children to participate as members of a group, encourage them to lead as normal a life as possible, provide them with an opportunity for some degree of success in physical education activities, and assist them in improving their physical well being.

For adapted physical education to be effective, the teacher must ascertain the values of various activities and integrate them into a worthwhile and beneficial program which has been approved by the physician. It is not the intent of this section to spell out programs for specific disabilities, for adequate information concerning these may be found by consulting the various professional books on the market. Instead a brief discussion on each condition, basic objectives, and general considerations and teaching suggestions applicable to the more common disorders are presented.

Cardiopathic Disturbances

Carefully selected physical activities are now routine procedure for those who have had some heart disturbances and are able to carry on their daily activities. This applies to children who have had rheumatic fever and rheumatic heart disease, which are responsible for two-thirds of all heart ailments among children. Unless medical advice dictates otherwise, these children should have few restrictions imposed upon them. The usual medically imposed restraints are:

A minimum of stair climbing (permitting the child to come late to class when stair climbing is unavoidable),
Rest periods as needed
Physical activities adapted to the individual's capacity or exercise tolerance
Avoidance of over-fatigue, exposure, and chilling
Continued medical supervision, check-ups at regular intervals,

and continued medication when prescribed.

In addition, the upper elementary and high school child needs counseling to avoid overexertion both in the academic classroom and in extraclass activities such as band, dramatics, and intramurals. He will also benefit from counseling in such matters as general health habits, diet, and rest. Finally, he needs someone to whom he can bring the many problems of growing up, someone who can assure him that with common sense and moderation he can enjoy life as well as anyone else.

Cardiac cases are often handicapped by adult projection fears. Parents are afraid that the child will over-do. The youngster who has been counseled to understand his own limitations will usually stay within these limitations of his own accord or else his cardiac or respiratory system will slow him down. However, the child who is prohibited from many of the activities of his group sometimes may engage in activities of another kind in a far too strenuous manner.

The American Heart Association has classified individuals with disease of the heart as to their functional and therapeutic capacities. Teachers should be familiar with this classification and use it as a basis for planning a physical education program.

American Heart Association

Classification of Patients with Disease of the Heart

Functional Capacity		Therapeutic Classification	
Class I	Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatique, palpitation, dyspnea,or anginal pain.	Class A	Patients with a cardiac disease whose ordinary physical activity need not be restricted.
Class II	Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea,or anginal pain.	Class B	Patients with cardiac disease whose ordinary physical activity need not be restricted but who should be advised against severe or competetive physical efforts.
Class III	Patients with cardiac disease resulting in inability to carry on any physical activities without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome are present even at rest.	Class C	Patients with cardiac disease whose ordinary physical activity should be moderately restricted and whose more strenuous efforts should be discontinued.

Class D Patients with cardiac disease who should be at complete rest, confined to bed or chair.

Classes I and II and Classes A, B, and C may be found in the regular school group. Recognition of the above limitations is necessary when selecting a physical education program for any children thus classified. The teacher must be guided by the physician's recommendations, which should call attention to activities in which the child must *not* engage.

Exercise is recognized as one of the most valuable means of increasing physical fitness. Within the individual's functional capacity, it tends to raise his health level by promoting better organic vigor, better neuromuscular control, better posture, improved elimination, and better morale. These improvements may well be considered the objectives of the program for cardiac cases.

In many instances, regular physical education activities can be enjoyed by the cardiac child who has been restricted only from competitive athletics. However, he must reduce his speed and/or tempo and must rest after a few repetitions. He must breathe freely instead of holding his breath, and he must, of course, know his limitations and stay within them.

SPECIFIC ACTIVITIES FOR CHILDREN WITH CARDIAC DISTURBANCES

Physical fitness and conditioning activities

Pelvic tilt
Situps, with pauses between exercises
Pushups, with pauses between exercises
Jumping Jack, with pauses between exercises
Chinning, with pause after each chinning movement
Squat and dip, with very short pause at squat and dip
Arching

Games

Low organization

Activities can be same as for other children but care must be taken to avoid continuous movement or sustained effort. Games such as Jump the Creek and Three Deep, which allow a rest between runs, are prefered to dodgeball or other games with continuous action.

Individual and dual

Basket shooting, Archery, Paddle Tennis, Table Tennis, Bowling, and Badminton provide an opportunity to rest between plays.

Team

Softball and Volleyball are excellent but games of the more strenuous type such as Football and Basketball are not recommended. Emphasis should be placed upon practices which will develop a high degree of skill, because the greater the skill, the less energy expended.

Relays

Preference should be given to throwing and pass relays rather than those requiring running, skipping, or hopping.

Self-testing activities

Though these can be the same as used by other children, special attention should be given to individual success so that the child will develop confidence in his physical ability and the will to use it. Rope climbing and other sustained effort or breath-holding activities should be excluded.

Rhythm and dance

The regular program can be used but with a limited amount of skipping and more rest periods.

Aquatics and water safety

Children must avoid extreme cold and chilling. Emphasis should be placed on the coordination of the arms and legs with rhythmical breathing in order to conserve energy.

Cerebral Palsy

Cerebral Palsy ranks as a leading cause of crippling in children. It is estimated that there are nearly 200,000 persons of all ages in the United States handicapped by this condition. The term cerebral palsy embraces a group of conditions varying considerably in manifestation and degree but having in common a lesion of the brain affecting motor control. The portion of the brain which governs muscular control is damaged. This damage cannot be corrected but muscular control can be improved. In many instances the disability involves other centers in the brain controlling speech, hearing, and vision. Some retardation, however, may be due to a lack of learning opportunity. For instance, the child with speech impairment may be denied those learning experiences which ordinarily are dependent upon communication skills. Depending on the extent of brain damage, the following are clinical patterns of cerebral palsy:

Spastic - comprising 50 percent of the group and characterized by hyperirritability and hypercontractibility of muscles.

Athetoid - comprising about 25 percent of the group and characterized by bizarre, irregular voluntary movements.

Ataxia or Flaccid - characterized by a lack of direction and balance

Tremor and rigidity - characterized by repetitive involuntary movements

About one third of all cases have emotional complications and lack good adjustments, but attendance at regular schools can be expected. Another one third will need special home or institutional care. The final one third with serious physical impairments but with average intelligence present the most complex problems in education and treatment.

Some of the latter group can be treated on a home-school basis, or by going to special classes or schools in which various therapies can be combined with a good educational program. Because the condition is now generally better understood, most parents will accept responsibility for helping their children live fuller lives. Feelings of resentment and rejection are being replaced by an understanding of the need for acceptance and the possibilities of personality development. Specialized types of therapy (speech, physical, and occupational) can supplement the efforts of the pediatrition, neurologist, neurosurgeon, orthopedist, opthalmologist,and psychologist, all of whom are aided by accurate laboratory studies. The spastic child needs to establish automatic motions and to develop voluntary movements within the limits of his spasticity. Passive and active movements are helpful in preventing contractures. The athetoid needs help and relaxation in trying to prevent motion, while the ataxic needs balance and kinesthetic sense training. Treatment is most effective when started as early as the child is able to profit from it. Better body balance and improved coordination should be constantly stressed.

The objectives of a program for children with cerebral palsy are: improved physical fitness and overcoming of contractures, improved coordination to promote better limb function and better tone of the weaker muscles, and development of an attitude of confidence in physical competencies. Exercises must be prescribed by the physician.

Specific Activities for Children with Cerebral Palsy

Physical fitness and conditioning activities

Games

Low organization

Games with a minimum of locomotion but with some verbal expression are best.

Individual and dual

Kicking and throwing activities which use the unaffected

limbs are good: Net Ball, Tetherball, Table Tennis, Horseshoes, Badminton.

Team

Lead-up activities and parts of games such as Kickball, Cageball, Basketball, Skyball, and Newcomb are suitable.

Relays

Single activities such as passing or running but not a combination of the two are recommended.

Quiet

For severely affected cerebral palsy children, various types of checkers and boards may be used either in school or at home. Because an unsteady hand will often hit the board and move all the checkers, making continuance of the game impossible, boards are now constructed so that there is a quarter inch hole in each square and a peg in place of the button-like checker. This peg is 4 inches long making a firm grip possible. A magnetic board with miniature magnets in each checker is another aid.

Many games can be constructed by children themselves with parents, and this will serve a double purpose. First, the child will receive pleasure in constructing the game and assisting the parent, and second, he will enjoy playing the game after building it. Some games which can be made from tops of orange crates or large cardboard boxes are Deck Discs, Box Ball, Fishpond, etc. The creative appeal of arts and crafts can give tremendous emotional satisfaction to the incapacitated child. When he is not required to use any definite pattern in his work, he usually does better and enjoys himself more because he is free from the tension of exact motor movements.

Self-testing activities

These exercises should be of a nature which helps the affected parts. They can include such activities as the backward jump, crabwalk, walking a straight line, skipping with one foot leading, and elephant walk. Tumbling activities should be limited to simple fundamentals. The use of climbing structures such as climbing towers and jungle gyms encourage the development of activities of climbing, crawling, hanging, etc. and also help children to gain more self-confidence in physical activity. Use of this equipment has to be taught slowly and should always be closely supervised. The climbing structures should be especially designed with small bars closely spaced, have a variety of levels, and be compact enough for an adult to easily reach all parts.

Rhythms and dance

Simple fundamental movements such as walking, marching, galloping, etc. should precede the use of singing games and folk dances.

Aquatics and water safety

Muscle tension of cerebral palsy children is increased in cold water because of physiological stimulation via muscle and nerve. To help them relax, these children should be started with periods of practicing the float position in water. Strokes, when begun, should be long, slow, and easy. Motivation towards relaxation (for instance, having the child imitate a seal or fish, with a relaxed body) will stimulate a high degree of interest and attention, and may raise the threshold against the motor overflow and reduce incoordinate movements.

One of the main objectives of swimming for the cerebral palsy child is to improve his morale and help him to develop skills which he can use in his recreation. If he develops these skills, he will build and maintain his organic strength.

Poliomyelitis

Because of the Salk and Sabin vaccines and subsequent results of medical research, infantile paralysis should now be classed with other preventable diseases. There are many children who have contracted polio and show various degrees of residual paralysis so have need for physical therapy and corrective exercises. The virus of poliomyelitis destroys some nerve cells and injures others. The affected nerves are those which cause muscular movement. Without movement, the muscle atrophies or wastes away. In addition, the opposing (antagonistic) muscle continues to grow and thus destroy the balance of the involved part. For example, if the muscles which draw the foot off the ground are not used, the muscles which oppose them or force the foot downward toward the ground will become strong enough to eventually prevent the foot from being drawn up.

An orthopedic physician can correct many of these deformities through operative measures, but the restoration of coordination and the development of the weakened muscle can be secured only through other agencies such as physical therapy and corrective exercises. Specific exercises should be prescribed by a physician after the muscles have been tested and their specific weaknesses are known.

Specifically the objectives of this program are: improved physical fitness and strength in the affected muscles, improved coordination and relief from tension, and developing of skills which will enable the affected child to participate in as many physical activities as his abilities will allow.

Specific Activities for Children Afflicted by Poliomyelitis

Physical fitness and conditioning activities

Specific corrective exercises should be prescribed by a physician.

Games

Low organization

Best are games requiring a minimum of movement: Hot Cross Buns, Simon Says, I Spy, etc.

Individual and dual

Shuffleboard, Darts, Archery, Bowling, and Table Tennis are good.

Team

Sport skills of some therapeutic value are recommended, such as catching and throwing to help affected arms and kicking activities for legs. Basket Shooting, Keep Away, Twenty-one, Goal Hi, and Captain Ball require very little movement from one place to another. Newcomb and Softball can also be enjoyed but modifications must be made for each child.

Relays

Relay games involving the passing of objects are better than running games involving movement from one boundary to another.

Self-testing activities

Self-testing activities and stunts provide opportunities for the handicapped child to match his skill, strength,and agility with his own achievement level as well as with others. Such activities in the primary grades can take the form of imitations of animal movements or individual feats of strength and endurance. The small child can imitate a hopping rabbit, a lame dog, or with others become a wheelbarrow or a rocking chair. The child in the intermediate grades will enjoy some advanced activities such as hand-knee crawling, crab walk, hanging, situps, pushups, and chinning. The youngster will gain a sense of adequacy through finding that he can do many of the stunts which his classmates perform.

Rhythm and dance

Rhythm expressions are developed through folk, square, creative

modern, and ballroom dancing. It may seem hard to realize that a child in a wheelchair can enjoy being a part of a square dance, but he can participate either by manipulation of the chair himself or with the aid of a partner. Restricted children using wheelchairs can follow difficult square dance patterns. Children can set their own speed even if not in time with the music, and they will derive much enjoyment from such activities.

Aquatics and water safety

The tendency to overdo should be watched. Since water is the only medium in which the brace-wearing or crutch-using polio child is completely free, he may tend psychologically to compensate in this environment for physical inferiority. A polio child in a state of rapid growth is especially vulnerable to all injurious influences.

Continued use or overuse of strong muscles imbalanced by weak muscles can be a factor in aggravating a deformity. There are three objectives of swimming for the polio child: to aid in the resocialization process, to strengthen weakened body parts, and to develop the affected area muscles that can be used in daily living.

Muscular Dystrophy

Progressive muscular dystrophy is caused by a defective state of nutrition in the voluntary muscles characterized by the gradual degeneration of these muscles. Most cases appear during the first or second decade of life, usually in males.

The child affected by the pseudohypertrophic form of muscular dystrophy seems awkward, loses his balance, and falls often. Because muscle fibers are replaced by fat, muscular development is poor. Weakness of the trunk, pelvic girdle and thigh muscles produce the characteristic symptoms of swayback, waddling gait, and difficulty in straightening the body in rising from a chair or going upstairs. While the disease is progressive and usually results in death induced by weakness of the respiratory muscles, regular stretching exercises to combat deforming tendencies and strengthen weakened muscles are important.

Specific Activities for Children Affected by Muscular Dystrophy

The various activities usually offered to the normal student can be permitted for the child with muscular dystrophy when he expresses an interest in them and when he has the ability to perform them safely.

With the knowledge that there is little hope for the child with this disability, the teacher should give preference to his desires and wants unless the activity is too dangerous or too far beyond his ability.

Games

Low organization

Games such as Squirrel and Trees, Crows and Cranes, Target Toss, etc. are good.

Individual and dual

Paddle and Deck Tennis, Horseshoes, and Tether Ball are better activities than those which require more running and skill.

Team

Tether Ball, Dodgeball, Line Soccer, and Softball are all good if the child has been taught the skills involved.

Relays

Relays such as Leap Frog, Goal Hi, and Squat Jump are better than those involving running, skipping, and jumping.

Self-testing activities

With individual adaptations the activities are the same as for all children.

Rhythms and dance

The same activities are suitable as those for other children, although the tempo should be slower.

Aquatics and water safety

The same activities as for normal children are appropriate.

Epilepsy

Present-day knowledge of epilepsy has removed much of the stigma formerly attached to this affliction. Those children with the more serious (grand mal) condition and who are mentally handicapped are usually placed in special classes or institutions. Children with mild seizures (petit mal) and many of the grand mal cases whose seizures are under successful control are usually under medical care and are being given the new anticonvulsive drugs for reduction in the frequency of seizures. These children may and do often attend regular classes in the public schools.

With the exception of an occasional seizure, the child is apparently normal. Other children should understand what is happening to a child with

a seizure, and the teacher can set the pattern by being prepared to deal with the situation and by taking proper first aid measures. The teacher's conduct in handling the victim will greatly influence the class, and if he has previously explained the nature of the illness to the other children, the seizure will be less dramatic.

Parents often need help in understanding the danger of concealing knowledge of the child's condition from the teacher or even from the physician. Knowing the epileptic child's limitations, the instructor can use most of the regular physical education activities with the exception of those involving body contact and climbing. Soccer, Football, Basketball, Wrestling, etc. should be avoided. Diving is not recommended, but Swimming, using the "buddy" system may be permitted. Overexertion, especially with too much exposure to sun and overexcitement during highly competitive activities, often triggers seizures. The epileptic child and his parents should understand the limitations involved and the reasons for these limitations.

Blindness and Partial Sight

For many years special residential schools or special classes have been provided for blind children (less than 20/200 vision).

The partially sighted child (20/70 vision in the better eye after correction) can be admitted to regular classes but special provisions are necessary to insure that he will make satisfactory progress without interfering with the rest of the group. However, other factors such as his interests and capacities, his ability, the degree to which he is able to orient himself to many class activities, and the size of the class in which he is placed must also be considered. Many of those children who are enrolled in the regular school program are given preferential seating and special equipment such as books written in large type.

Some eye conditions may necessitate minor restriction in physical education classes. A physician's recommendation should determine those activities in which the child should not engage since the amount of participation these children may have will often vary a great deal. The eye examiner will be able to indicate whether there is danger in certain games and activities.

The physical education of the visually handicapped child should be started as soon as possible. Touch and hearing competencies should be stressed. Normal movements of the 2-year old child should be encouraged within bounds of reasonable safety, so that when he is ready to enter school he can climb, run, jump, hop, throw, catch a large ball, and perform the usual physical skills in an acceptable manner. Experience in group activities prior to entrance into school should give the blind or partially sighted child some degree of social competency so that he will have a better chance of getting along with other children.

However, until more parents understand and assume responsibility for this preschool phase of the education of the visually handicapped child, it

can be assumed that he will need help in overcoming his deficient body skills. Kindergarten will probably be the child's first formal educational experience. Here he can gain those experiences he has missed in his earlier years, and this will help him become better prepared to enter the first grade with a background similar to that of other children.

Many of these children need to develop better physical fitness, improve their coordination, and acquire fundamental skills in large muscle activities. Deficient physical fitness can be overcome as skill develops in fundamental movements. Participation in these activities may overcome the natural hesitency of some of the visually handicapped. With improved fitness and manipulative skills, the visually impaired child can then participate with reasonable success in the game activities. Any feelings of restraint and frustration are likely to be overcome when he has gained recognition and acceptance by his group. In addition to the activities designed to develop fitness, attention should be given to practicing desirable health habits such as a balanced diet and adequate rest and sleep.

Activities for the visually handicapped child should be on a par with those of other participants in his group. Rather than always acting as a scorer in volleyball, for instance, he should be given adequate help in acquiring ball handling skills necessary for him to play the game in a satisfactory manner. Glasses should be shatterproof or a protective device should be worn. Special attention should be given to orienting the visually handicapped child to his environment and to helping him to locate equipment. Hazards must be recognized and avoided. Swimming is a safe activity when the usual precautions are observed. Various pieces of apparatus in the gymnasium may be used safely if clear instructions have been given and the activities are properly supervised. A child should attempt stunts only when the proper degree of skill and confidence has been developed.

The objectives of the physical education program for blind or partially sighted children are to promote a higher degree of physical fitness through physical conditioning, activity skills and better body mechanics, increased social competencies, and improved psychological security to help face reality and to gain confidence in their ability to do what others do.

Specific Activities for Blind or Partially-sighted Children

Physical fitness and conditioning activities:

- Pelvic tilt
- Situps
- Pushups
- Jumping Jack
- Chinning
- Squat and dip
- Arching

Games

Low organization

These can be the same as offered to the normally sighted child, with selection based on simple activities requiring a minimum of hand-eye coordinations. Whenever group games are played the child with a visual handicap should be assigned a part which he can successfully carry out. If at all possible, no situation should be allowed to arise where he is a bystander. He must have an opportunity to participate in some capacity in most class activities if he is to acquire feelings of acceptance and status in the group. To satisfy the child's desire for movement, games of a running nature such as Brownies and Fairies, Jump the Brook, and London Bridge are preferred.

Individual and dual

Rope Jumping, Golf, Tug-O-War, Rope Skipping, and Bowling are good because sense of touch plays a prominent part.

Team

The same activities are recommended as those offered the normal student, with emphasis on leadup games and skills (punting and throwing a football, and shooting a basket).

The American Medical Association and the New York State Education Department recommend that a pupil who does not have function of both eyes should not participate in such sports as Lacrosse, Baseball, Soccer, Basketball, Football, Wrestling, Hockey, and Rugby.

Relays

The same events are appropriate as those offered the normal student with preference given to running, skipping, and hopping rather than ball handling.

Self-testing activities

Fitness test items such as situps, chinning, and rope climbing are good. Fundamental activities in tumbling tend to satisfy the child's desire to excel. Animal imitations are particularly appealing to young children. The horizontal ladder used for hanging and handwalk is especially good for the development of shoulder and arm muscles.

Rhythms and dance

Fundamental rhythms: running, skipping, hopping

Singing games: "Bow, Bow, Belinda"
Creative rhythms: interpreting music as each child hears it
Folk dance and square dance: with a sighted pupil assigned as a partner for a partially sighted or blind pupil
Ballroom dancing: especially good for junior and senior high school boys and girls
Modern dancing: both boys and girls should participate.

Aquatics and water safety

Swimming experiences should be started early in the child's life. The objective should be to teach him to swim well, learn self-preservation, develop a degree of physical fitness, and acquire a desirable recreational pursuit

Deafness and Hearing Impairment

These types of impairment should impose little or no restriction on a child's physical education program. However, many children so afflicted have not had the early play experiences of normal children with the result that their physical and social development is retarded. Thus, it is extremely important that the child with such restricted background have experience in simple fundamental movements before he can participate in the usual activities of the normal group. Simple marching and running need to be learned before he can skip, leap,or hop. A large softball helps him learn to catch. A maximum of demonstration and a minimum of verbal instruction will aid the learning of the deaf or hard of hearing child, especially in the primary group. Children who wear hearing aids should use them in all activities except aquatics and contact sports.

Specific Activities for Deaf and Hard-of-Hearing Children

Physical fitness and conditioning activities

Pelvic tilt
Situps
Pushups
Jumping Jack
Chinning
Squat and dip
Arching

Games

Low organization

Preference should be given to activities which do not involve verbal expression. The teacher should be careful to arrange

the class so the deaf child can see any teaching demonstration.

Individual and dual

Game skill should be perfected to develop self-confidence. The selection of activities is the same as for normal children.

Team

The same games as those for normal group are good.

Relays

These can be the same as for the normal group unless verbal expressions are needed.

Self-testing activities

Physical fitness test items and weight training are good for this type of child. Tumbling and apparatus work are the same as for the normal group. The totally deaf child sometimes has difficulty with balance, so the teacher should proceed slowly, lessening the possibility of failure and loss of confidence.

Rhythm and dance

Those with hearing difficulties often show a marked interest in activities requiring hearing and sense of rhythm. Basic rhythms assisted by verbal accompaniment, help the afflicted child in his use of fundamental movements and give him greater social security. Marching to music and singing are also greatly enjoyed by deaf children.

Aquatics and water safety

Activities are the same as for other children. However, the teacher may need to use some hand signals to indicate the swimming motion desired.

Orthopedic Disabilities

Orthopedically handicapped children are those with bone or joint disabilities. The disability often involves the nerves which control the movements of the affected parts of the body, and may be caused by disease (poliomyelitis), brain injury (cerebral palsy), vascular damage (cerebral hemorrhage), or other forms of injury. The usual characteristics are impaired or faulty motor performance, and poor balance or muscular weakness in varying degrees.

The child who is orthopedically handicapped must first receive all possible assistance in restoring the affected part of the body to normal function. This may be done by surgery or braces. He also requires aid in regaining lost coordinations or in developing new ones. Finally, he needs exercise to promote strength and endurance in the affected limbs.

Physical education does much to satisfy the handicapped child's desire for movement, social contacts,and group recognition. However, he must first learn to face reality. A child wearing a brace on his leg cannot, of course, run as fast as one without. If his limitation prevents him from playing a game of regular basketball, he may be able to compete in other basketball activities such as basketball golf, and twenty-one. Without his brace, he may compete successfully in rope climbing, chinning,or swimming.

The orthopedically handicapped child r ' gain as much enjoyment and satisfaction from rhythms as will the norma, .ne. Waltzing is not beyond the ability of the older child wearing a leg brace and it may do much to raise his morale. Rhythmic expressions are developed through folk dances, square dances, modern and social dancing. It is often difficult to realize that the child in a wheelchair can enjoy being part of a square dance group by manipulating his chair himself or with the aid of a partner. Braces do not stop a boy from dancing with a girl if they are both able to retain their balance. Remember that if the patterns for the dance become too complicated, the child will lose interest.

Congenital deformities such as club foot, spina bifida,and hip dislocations usually impose limitations which automatically restrict .ie individual. When the orthopedic physician feels a child with any of these deformities can attend school, it is often a problem to curtail his desire to do more than he can do safely. The recommendations of a physician should be followed and as many of the regular activities as can be safely adapted to the child's limitations should be used.

Mental Retardation

Special classes are provided to give the mentally retarded child (50 to 75 IQ) the best opportunity to acquire an education in keeping with his talents and abilities. In the area of physical education, however, his needs are not radically different from the normal child's. Physical education should, therefore, follow the same pattern as for the average pupil, with particular emphasis on personality development, self-care and grooming, vocational and social skills, and wise use of leisure time. Stress should be on a high degree of physical fitness and efficient use of the body.

Through rhythmic activities, games and team activities, the mentally retarded child has many opportunities to improve his social competencies. The satisfaction of successful participation will reduce his aggressions and tensions,and will, therefore give him a feeling of adequacy. Denied these opportunities, he may gain substitute satisfaction along lines which are not socially acceptable. His success in physical education activities not only may compensate for failures in other areas, but may act as motivation to put forth greater effort for social or even academic acceptance. The primary child who joins in singing Farmer in the Dell and Looby Loo is developing

communication skills. This success may well act as a stimulus for him to master other communications assignments.

The older child needs help in adjusting to his environment. Game experiences should emphasize the spirit of team cooperation and unselfishness.

In physical education the mentally handicapped child has many opportunities to deal with concrete rather than abstract material. Very simple games which provide adequate time to progress from one basic step to another supply much needed competition for this type.

The formative years of the mentally retarded child should be rich in play experiences which will help to promote better learning. Some objectives of an adapted program for mentally retarded children should include development of: skills and attributes of a good leader, respect for the rights and property of others, ability to work and play with others, willingness to share privileges and responsibilities, acceptance of the role of a good follower, sufficient skills for satisfying experiences while participating, and appreciations and desirable attitudes as a participant.

Mentally retarded children need experiences which will develop better physical fitness. Whatever vocational opportunities may be open to them, their needs are likely to be more physical than intellectual. Their jobs will often be of the helper type. Lines of action must be defined for them. They need to be good followers. Development of large muscle groups (abdomen, back, shoulders, legs, arms, and feet) is necessary for efficient use in walking, running, climbing, throwing, and catching. Skills must be perfected through simple but fundamental movements of bouncing, batting, catching, and throwing a large ball. Initial learning must be thorough. Fortunately, repetitive movements are enjoyed by this group for they often are fearful of the new. Everyday activities, such as properly walking up and down stairs, appeal to these children. Posture improvement aids them in better grooming and subsequent social acceptance.

Opportunities for self-expression come when activity is coordinated with a story as in London Bridge or the Showmaker's Dance. Marching and dancing help the mentally retarded child develop his ability to play with others. He learns to follow directions in such games as Follow the Leader, Simon Says, etc. He learns to take turns and obey rules in such games as Crossing the Brook and Dodgeball.

The mentally retarded child needs to develop the ability and the urge to use his leisure time wisely in activities which are socially acceptable. The lure of many commercial entertainments presents a challenge which may be partially met by his being trained to a high degree in skills for team games like Softball, Basketball, etc. He also needs skills in individual and dual activities such as Handball, Tennis, Bowling, etc.

Specific Activities for the Mentally Retarded Child

Physical fitness and conditioning activities

Pelvic tilt
Situps

Pushups
Jumping Jack
Chinning
Squat and dip
Arching

Games

Low organization

Games which make use of simple fundamental movements such as marching, running, skipping, etc. are suitable. Single response activities like kicking a stationary ball, must be mastered before dual activities such as hitting a moving object can be performed successfully. Taking turns and getting along with other children are essential parts of the total game activity. This simple group activity often helps to bridge the gap between self and group. Games such as Circle Chase, King Call Ball, Statues, Dodgeball (not too many in center and a short time span) and Pom Pom Pull-away are especially good. These games are well suited to the mentally handicapped child and can be modified to meet the new interests of each individual. All the above require only a few rules but furnish considerable activity. Few rules and few directions should be the criteria when selecting games for mentally retarded children. Complicated games should be avoided, although parts of many common games such as rolling or throwing, catching or kicking a ball, running and tagging can be used. In demonstrating game activities the teacher must allow adequate time for practice of these skills. He may arrange such practice after the game has been played and the children are ready for more thorough learning of the various skills. Each day should include activities involving some habit of reflex movement such as running, jumping, hopping, etc. Throwing may continue for a period of time: with and at different objects, throwing higher, throwing to others gradually developing into the game of Keep-Away. Progression is naturally very slow with this group. Activities should be simple in the early primary grades.

Play periods should be frequent and short. One or two skills well learned and practiced are better than four partially learned. In group activities the attention span of the mentally retarded child is likely to be short. A variety of free activities, rhythms, story plays, etc. each day will be received well by this group.

Mentally retarded children are much more interested in playing a game than in considering rules. It takes drill and much repetition for them to understand directions and regulations, and they should have to learn only those rules that will increase their enjoyment of the game. Appealing for their attention will prove much more effective then demanding it. Praise will

always be stimulating. Slow direct instruction should accompany demonstrations. Verbal instruction should be kept to a minimum.

Individual and dual

All those offered to normal children are appropriate, with special emphasis on simple coordinations such as jumping, running, dodging, and activities which allow some expression of personality.

Team

Captain Basketball, Base Basketball, Newcomb, Line Soccer, and Touch Football are all good if played with simplified rules. It is best if a few rules are taught each day rather than many at one time. The latter will confuse the mentally retarded child and cause him to lose interest.

Relays

Team development comes when the child grasps the idea of competing as a member of a group and not as one individual against another. Simple relays involving running to a specified object and returning to touch off the next runner should precede the handling of objects in a relay. Gradually children may carry a large ball to the next runner. Dribbling a basketball and shooting a basket as parts of the relay should be delayed until these skills are thoroughly mastered. Remember: success is stimulating; failure is depressing!

Self-testing activities

Simple stunts requiring a minimum of imagination or coordination are necessary. Fitness test items and chinning, ball throwing, bag punching, and animal imitations are all good. Mentally retarded children should have the same opportunities as normal children in tumbling and apparatus work.

Rhythms and dance

Mentally retarded children receive great satisfaction and enjoyment from simple repetitive music. A few dances learned well and repeated many times are better than too many done occasionally and superficially. Like all children, the mentally retarded like to listen to music and then to interpret it as they hear it. This should be an easy way to introduce rhythms. The sense of rhythm will differ greatly even in such movements as clapping, swinging, swaying, rocking, and tapping.

Language skills can be enhanced through singing games. Every

opportunity should be given for any reasonable verbal expression accompanying the activity. Many retarded children enjoy marching without too much emphasis on step and formations, but with changing of direction and speed. From these drills, pupils can progress to simple folk dances and social dances.

When folk and square dances are first introduced, there should be only a limited amount of changing partners. Square dances which include the grand right and left and other difficult calls should not be included until the children have mastered simple calls. Mixers such as the Hula Mixer and Five Foot Two are often used to introduce some of the basic ballroom dance steps. The waltz step is one of the most difficult for the mentally retarded child because the music is not vigorous and exciting enough to interest him.

Aquatics and water safety

The same skills desirable for normal children should be taught to this group, only the approach will be different. The objectives are to teach the child to swim or swim better, to give him an opportunity to experience success while having fun, to improve his physical condition,and to provide him with recreational skills.

Speech Impairment

Speech impairment may be due to involuntary sound production, voice disorders, faulty rhythm (stuttering), or delayed speech (aphasia). The basic cause of the disturbance may be an organic condition such as a cleft palate or malocclusion or it may be emotional or a combination of both.

The common symptom of speech defects are nervous tension and poor coordination, so that whatever therapeutic value physical education has may be summed up as compensation through tension-relieving activities. Physical education should assist the individual in the improvement of his respiratory-muscular speech movements with a minimum of tension. Such games as Oats-Peas-Beans, Here We Go Around the Mulberry Bush,and Hokey Pokey are good in the primary grades because they call for movement to be acted out and described in speech at the same time. A stutterer seems less tense when he is using his large muscles for simple running, kicking,or throwing activities, and his defect may temporarily be less evident.

Keeping in mind a need for relaxation and avoidance of tension-producing situations, the average speech case can be given all the physical education activities offered to normal students. Special attention should be placed on rhythmical activities aiming for better coordination and improved posture. Even the most highly competitive group games may be used. However, skills must be thoroughly learned to enable the child to perform without tension.

Social and Emotional Maladjustment

This group of atypical children is easily identified *en masse* but difficult to describe as individuals. Their social reactions are usually contrary to what is expected of the so-called normal child. Atypical children may show little feeling or their emotions may be exaggerated. They are variously described as selfish, sullen, suspicious, overly aggressive, insecure, and antisocial.

Some children of this type have obvious physical defects while others are in seemingly good health and display no outward signs of being different. As a rule many lack the diversity of skills which might enable them to perform reasonably well in the activities of their peers. The exercise of inherent abilities, a cardinal sign of physical and emotional health, is often lacking in this group. Their history shows one characteristic above all others: they have not had much experience in activities which develop social competencies. Early in life the natural desire for recreational activity may have been inhibited, obstructed, or distorted by cultural or social pressures. Their healthy road to wholseome leisure has been blocked. Feelings which are common to the average person--love, affection, security, self-confidence, desire for group recognition, and social approval--have not been adequately satisfied. Opportunities for meaningful interaction with other people as social beings have been lacking. Socially maladjusted children are emotionally unstable. They need security, a chance to achieve, and personal status.

The basic cause of the condition must be determined before any real cure can be considered. Complete health, psychiatric, and other diagnostic tests must be used. Physical defects of a sensory nature (hearing and visual handcaps), intellectual impairments (reading difficulties, mental brilliance, or retardation), and home conditions must be considered as possible contributory causes. The show-off may be trying to gain recognition to compensate for something lacking in his home situation. The cause or causes of the condition must be recognized. If the cause cannot be removed, it must at least be recognized and some compensation must follow.

Physical education activities may be considered palliative, and when they contribute toward some relief of the symptoms they have therapeutic value. Many of the competitive activities of the regular physical education program seem to have value for emotionally disturbed children. Perhaps some thought should be given to the use of these activities as one means of preventing or inhibiting the disturbance. Selected games can be used successfully for individuals to release their aggressiveness along conventionally accepted lines. These experiences may, in fact, give maladjusted children opportunities to achieve a certain pre-eminence and to sense the need for cooperation, acceptance of rules, and other socializing values. Above all, physical education will provide an outlet for the desire for activity felt so strongly by this group.

Many maladjusted children who rebel against man-made rules accept without question the rules of the game. They seem to understand that such rules are made for the purpose of preserving order in the activity, and they penalize themselves when they disturb that order. The maladjusted child may

continue to play Basketball as long as he plays in an orderly manner. If he is disorderly (contrary to rules for the best game procedure) and his playing disrupts the order of the contest he fouls out. Perhaps more early training in cause and effect, give and take, need for consideration of others, and the values to the individual when he becomes a contributing team member might help the young child to conform to the principles and practices of democratic living.

The objectives of physical education for maladjusted children are physical fitness which will give the individual a confidence in his ability to do what others do and social competencies which will give him a feeling of status and acceptance.

Specific Activities for Socially and Emotionally Maladjusted Children

Physical fitness and conditioning activities

Any good series of vigorous, large muscle activities such as push-ups, chinning,and situps which do not require skills or coordination beyond the individual's ability are recommended.

Games

Low organization

Games which release the child's aggressive ways are best: Kickball, Beater-Go-Round, Kick Football, and Strike and Chase.

Individual and dual

Tether Ball, Horseshoes, Paddle Tennis, and Deck Tennis are all good. From grade 4 on, special emphasis should be placed on the development of skills. Handball can be started in the intermediate grades. Bag punching is often used with boys.

Team

Dodgeball, Softball, Flag Football, Soccer, Goal Hi, and Basketball are all used successfully with this type of child. The desire for peer prestige at the intermediate level necessitates having adequate skills for successful performance. Remember again: success is stimulating; failure is depressing!

Relays

These should be the same as for normal children.

Self-testing activities

Activities of the regular group are adequate.

Rhythm and dance

Fundamental rhythms are very important in order to insure smooth performance before undertaking regular dance patterns.

Aquatics and water safety

No differentiation need be made from the normal group unless individual differences call for modification.

Gifted Intellect

Educators have been placing increasing emphasis on developing to the maximum the education of intellectually gifted and talented young people. Programs in physical education should be developed and differentiated for these unusual students just as much as in the areas of mathematics, science, art, etc.

It is difficult to define the gifted child. Certainly, it cannot be done in terms as precise as IQ scores. The mentally gifted constitute about 1 percent of the total population. Gifted children might be said to be so brilliant that, in many but not all cases, they set themselves apart or are set apart by others from their classmates. Like other exceptional children, they deviate significantly from the normal. "Talented" refers to those who perform rather consistently in the upper 5 percent of their peer group, and they may be found in such areas as art, music, mechanics, speech, leadership, and physical dexterity.

The earlier such a child can be given a program of physical education adapted to his needs, the better. This program must be enriched by opportunities for leadership and for gathering information on such things as game strategy and (for upper elementary and secondary) the physiological benefits of fitness and advantages of good body mechanics.

Many experiences which challenge gifted children's intellects and cultivate their abilities should be offered. They are often both physically and mentally superior to most youngsters and are often bored by some of the physical education activities which hold the interest of their peers. When an activity lacks challenge and interest, they innovate to increase the complexity of play; this then tends to antagonize the other players who consequently react by excluding them from future play. The physical educator's contribution to the total education of the gifted pupils is that of keeping them active in the kinds of activities which benefit them and at the same time hold their interest. Strategy and play formations may be introduced to them to provide additional breadth in their game experiences. They should be encouraged to devise new plays and formations that give them opportunities to teach others. Opportunities to choreograph dances often prove to be of great interest to the gifted pupils, both boys and girls.

Many of these pupils are often interested in additional reading about sports, sports figures, dancers, history of various activities, etc. which

broaden their knowledge and appreciation of both ancient and modern cultures.

Although many mentally gifted pupils do develop faster physically than others of the same chronological age, they are often smaller and less mature physically than others in their class. This is due to the fact that many times they have been placed in accelerated groups. If a child is several years younger than most of the children in his class, he may find that he is below the average in physical performance. This may cause him to withdraw from physical activities and participate in those which are predominantly mental and which he feels more security.

While the gifted child needs to play with all children, it is often desirable to allow him to participate in more individual and dual activities until group pressure causes him to see the greater need for teamwork. Once he has the skills, he can participate with his group with the assurance of an individual, as well as a team member.

For the gifted group as well as others, activities involving the wise use of leisure time should be given serious consideration. Such activities provide a change from sedentary experiences and help maintain a higher degree of health and efficiency.

Specific Activities for Gifted Children

Physical fitness and conditioning activities

The gifted child should be encouraged to realize his highest physical potential. With some direction he can understand the principles of good posture, the muscles involved in correct body mechanics, and the need for exercises to promote good posture. This self-appraisal often leads to his selection of exercises designed to overcome any skeletal or muscular deficiencies.

Games

Low organization

Gifted children in the primary grades should have many problem solving experiences. They might use different sections of the newspaper for movement studies; they might show some of the action seen in the pictures of the sports page; they might interpret the comics.

The class could form a circle which would represent a balloon; then pupils could discuss and move to show what happens when air is blown or pumped into a balloon, when the air escapes slowly, when the balloon is punctured, and when it is released.

A game such as Number Call could be more of a challenge if two or more numbers were called to be used as a mental problem in addition. The child representing the correct sum

would be the one to run.

Many times bright children will create games. The teacher should let them teach the activities to the rest of the class.

Individual and dual

Activities should be those in which individual effort has its obvious reward: Deck Tennis, Horseshoes, Table Tennis, Golf, Tennis, Badminton, etc.

Team

The gifted child may often enjoy managing a team, and can analyze its weak and strong points with the aim of improving its general performance.

Self-testing activities

The gifted child may show great interest in improving his own skill rather than being compared with his peers.

Rhythms and dance

The gifted child will often excel in creative activities when he is not hampered by having to follow the group. A knowledge of folk, square, and ballroom dance is important to the gifted child as it will help him improve interpersonal relationships. Pupils who are gifted intellectually are often interested in modern dance since they can perform alone much of the time.

Aquatics and water safety

Instruction should be the same as for the normal group, though the gifted child may well progress more rapidly.

Miscellaneous Disturbances

Anemia

This condition calls for rest in the acute states, or, when the physician so recommends, a graduated exercise program. The child afflicted with anemia will tire easily and generally have certain limitations placed on his activities until he is completely recovered. He should not engage in strenuous activity until recovery is evident.

Diabetes

Diabetes mellitus is a metabolic disturbance characterized by a

deficiency in insulin. This deficiency apparently sets up a sequence of events such as impaired glycogen formation in the liver and muscles and deficient utilization of glucose. In the early stages a diabetic child is likely to be underweight, whereas an adult is frequently obese. He may have an abnormal appetite but fail to gain weight. Sugar is found in the urine.

A diabetic child is usually encouraged to participate in normal sports and recreational activities. The recommendations of a physician must be followed in every instance, however, in order that the child's tolerance for exercise be known. Highly competitive activities should be avoided because of their heavy fatigue factor. In most instances frequent rest periods are a necessity.

Conditioning exercises not only help burn up body sugar but are necessary to promote general physical fitness. These exercises must be regarded as a necessary means to an end. To be able to play tennis well, one must have good organic vigor, good muscle tone, and skill. Practice requires endurance with a minimum of general fatigue.

When this stage of excellence has been achieved, the individual will begin to get real satisfaction from his accomplishments. He will develop a feeling of "I can," and he may see more clearly the necessity for diabetic control and the adherence to health habits which will allow him to compete successfully with his peers.

Dysmenorrhea

Painful menstruation is one of the most common conditions among school girls and young women. Much recent research has been devoted to seeking the reason for this disability, but to date the exact causes are uncertain. Several, all related to daily living, have been suggested: fatigue, emotional problems, and lack of reasonably vigorous activity.

Since the turn of the century, various exercise techniques have been developed for the relief of dysmenorrhea. Daily exercises for relaxation, circulation, abdominal strengthening, and posture improvement should be given to relieve this condition. A special exercise called the Billig stretch is particularly helpful in relieving the pain associated with dysmenorrhea. This exercise is accomplished by having the girl stand, feet together, with her side approximately 18 inches from a wall. The forearm is placed against the wall at shoulder height. The opposite hand is placed on the hip and pushes the hip in toward the wall as far as can be tolerated without actually touching the wall. Then she returns to the starting position, and repeats the exercise three times on each side.

Leukemia

This is a disease of the blood which often affects children. Medical science has done much to postpone its fatality, and many affected children are attending school. Every attempt is made to permit them as normal a life as possible.

The child with leukemia should be given opportunity to engage in the activities of his classmates, based on the recommendations of the physician in charge. In fact, he should be encouraged to participate because of psychological benefits which result from his social contacts. More vigorous activities which might cause frequent falls should be avoided if possible because of the danger of secondary infections.

Low Physical Fitness

For children who fall below satisfactory levels of physical fitness, as determined by existing valid tests, the schools have a special responsibility. While not considered as handicapped in the broad sense of the term, the child who is not physically fit does require special assistance. In many cases, such children are awkward and unable to participate in activities that call for a sustained physical effort, and they experience difficulty in learning skills. All too often these inadequacies, if unchecked or uncorrected, lead to social and emotional disturbances.

At all levels, children can achieve and maintain a high degree of physical fitness as a result of participation in an effective school program, based on sound principles of physical education encompassing developmental activities, sports, and recreation.

Recommendations of the President's Council on Physical Fitness and of the State Education Department include the following:

> Identify the physically undeveloped pupil and work with him to improve his physical capacity.
>
> Provide a minimum of fifteen minutes of vigorous activity in each daily period of physical education.
>
> Use valid fitness tests to determine pupils' physical abilities and evaluate their progress.

Lowered Vitality

There are some children who, though they do not suffer from a particular disability, are not considered physically fit and may be classified as "temporarily exceptional." Some have had recurrence of chronic illness. Some have had a short bout with an acute disease or virus. Others are recuperating from an operation. The common characteristic of this group is lowered vitality and an early onset of fatigue. All phases of their school and outside activity program should be modified until their general health and vitality have improved.

Regular rest periods are often prescribed by the physician. In some instances these pupils should be spectators during their physical education periods. The physician's recommendations should be broad enough to cover not only the proper diet, rest periods, and needed medication but also specific recommendations as to the children's physical education needs.

Overweight

A medical examination is necessary to determine whether the cause of this condition is glandular, hereditary, emotional, or dietary. The overweight child may participate in all activities where he will not be extended beyond his capacity and where he will have the opportunity to achieve some success. During the physical education program the child should avoid such fatigue-producing activities as distance running, continuous jumping, and heavy lifting. His weight should be checked weekly. Any gain should be investigated and any loss should be praised. If a diet is followed, it should be under the direction of a physician.

Underweight

A physical examination is necessary to indicate whether this condition is caused by an inadequate or unbalanced diet, chronic disease, poor health practices, or psychological problems. Even though this child is below usual weight standards, he may be in good physical health and should participate in all the activities offered in the physical education program. For the underweight child who tires easily, modifications affecting the duration and repetition of activities should be made; and he should have frequent rest periods. Often the underweight child has poor posture; therefore, exercise to improve muscle tone and posture is indicated.

Posture Problems

The use of posture as one test item in the New York State Physical Fitness Test raises two questions: First, what can be done to prevent poor posture? Second, what physical education activities will be most beneficial for those with poor posture?

A pupil need not have poor posture unless some congenital or acquired defect or disease has resulted in faulty body alignment. An early health examination, correction of health impairments, practicing good health habits, avoidance of crippling accidents, and regular participation in a well-balanced progressive program of physical education should provide the student with a strong body structure and good posture. This program must start in the kindergarten and be continued daily through high school.

A well-balanced program of physical education for those with poor posture should include:

Conditioning activities specifically designed to strengthen muscles which are not used vigorously enough in normal daily living.

Games of low organization, informal, individual and dual games, and team games.

Self-testing activities such as stunts, tumbling, and apparatus activities.

Rhythms and dance including creative, square, folk, ballroom, and modern dancing.

Aquatics and water safety with instruction in swimming, diving, survival, and rescue.

Participation

Regular participation in a well-balanced program should develop the various muscles which hold the body in proper alignment. Satisfaction in the ability to employ skills involved in the activities mentioned should lead to their being used in various healthful activities.

Hinderances to Good Posture

All possible hindrances to good posture must be removed before a child can hope to benefit from physical exercise. This applies to faulty diet, fatigue, emotional disturbances, and other health hazards discovered during the health examination. Medical supervision for the removal of causes of poor posture is the first step in those cases in which the cause can be determined.

The two main types of poor posture are lateral curvature and anteroposterior curvatures.

Lateral Curvatures

When observed from either front or back, both sides of the body should be symmetrical. Shoulders and hips should be level; spine straight; waistline contours equal. Very slight asymmetry is usually of no importance.

Functional lateral curvatures are those which can be straightened when the body is either supine or suspended. They are usually caused by faulty habits of standing or sitting and by muscular weakness, and early detection and treatment can benefit them. Pupils in their late teens whose bone growth has reached its maximum, are more resistant to correction than those in primary grades.

Structural curvatures are those in which secondary changes have taken place in the bones, ligaments, and muscles. The curves remain when the individual is lying down or when his body is suspended, and are resistant to change. Many neglected functional curvatures become structural.

In addition to the symmetry as viewed from front or back, there is the symmetry as the chest cage is rotated. In an attempt to balance an uneven trunk, a secondary compensating curve usually develops. So, a child who starts with a low right shoulder (curve left), may unconsciously attempt to restore his balance by developing a secondary curve.

Exercise will help to develop muscle strength and tone in cases of

functional curves. In addition to symmetrical calisthenic exercises, rhythms and games should be encouraged as well as those self-testing activities which involve the shoulder girth muscles. Swimming has the distinct advantage of promoting trunk muscle development without weight-bearing strain on the spine. Exercise alone, however, rarely produces the desired correction in structural curves. Severe cases are often recommended for participation in adapted activities, but more as a protective than a corrective measure.

Anteroposterior Curvatures

When observed from the side, the head, upper trunk, and arms, and the lower trunk and legs should be aligned over the feet in a more or less vertical zone.

When the head is thrust forward or the shoulders are too rounded, or the lower back is hollow the anteroposterior posture is faulty. As with lateral curvatures the condition may be functional and subject to correction, or structural and resistant to change.

In both lateral and anteroposterior curvatures, exercises may help to improve muscle tone and strength. Activities which place the body in a symmetrical position, and games and sports which call for symmetry are needed. Cartwheels, handstands, swan dives, and modern dances are examples of symmetrical movements.

MEASUREMENT AND EVALUATION

The Purposes

Measurement and evaluation are the processes of appraising the extent to which education achieves its objectives, and their primary purpose is to improve instruction. Only by carefully appraising student status and all the factors surrounding learning can educational procedures and teaching methods be adequately judged.

The information provided by measurement and evaluation in physical education can be utilized in many ways. The findings can be used to group individuals according to similar mental or physical traits and to insure better instruction. These findings yield information about a student's achievement in various skills and activities. They provide information useful in predicting future performance and development. They supply data on attitudes that reveal motivation and thus focus attention on action that needs to be taken in the future.

Generally speaking, the purposes of measurement and evaluation for the exceptional child are the same as those for the normal child. They are stated here to focus attention upon the importance of evaluation to the physician, teacher, and student working together in the adapted physical

education program:

To determine the present ability of the student when he is assigned to the adapted program

To assist the teacher in setting up a program of exercises and activities for the student

To determine periodically the progress which is made by the student

To serve as a check on the effectiveness of the program in which the student is participating

To serve as a motivating factor for the student in his efforts to achieve success

To serve as a tool for instruction

To serve as a basis for the collection of data on research.

Types

An adequate program of appraisal is a long range program and follows these generally accepted steps in the process:

Definition and approval of objectives
Selection of appropriate techniques
Gathering of accurate data
Appraisal of the results obtained.

Tests usually attempt to measure physical fitness, motor skills, behavior and attitudes, and recreational skills. The Research Council of the American Association for Health, Physical Education and Recreation has prepared a list of selected tests which meet nationally established criteria. Many of these are found in each of the following categories:

Circulatory - respiratory
Anthropometric, posture, body mechanics
Muscular strength, power, endurance
Flexibility
Motor fitness
General motor skills
Knowledge and understanding
Sports skills
Attitudes and appreciation.

Uses

The primary purpose of any evaluating tool is to improve instruction. Only by carefully appraising student status and all the factors surrounding learning can educational procedures and teaching methods be adequately

judged. Measurement and evaluation can be used in the following ways:

By the teacher:

To determine how pupil achievement measures up to ability

To devise programs for those students whose achievement does not measure up to expectations

To inform parents of students' achievement, and to secure their cooperation in selecting activities best suited to abilities and needs

To improve instruction.

By the student:

To analyze his own abilities and to determine ways in which he can receive greater values from physical education

To determine his own needs and to choose activities in which these needs will be met

To analyze his own interests and to understand how important a part they play in getting the most from physical education

To examine his attitudes toward increasing his own gains from physical education.

By the administrator:

To inform the school board and others of the community about the progress of the program

To explain to other teachers what the program is accomplishing

To plan revisions and additions to the program in order to increase its contribution to the total educational program of the school.

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